Design Review Action Items

Item Number: _____ **Date:** _____

Meeting: _____

Originator: _____

Organization: _____

Short Title: _____

Action to be accomplished:

Assigned to: _____

Organization: _____

Date to be Completed: _____

Div Head/ Grp Lead Concurrance: _____

Action taken: (use more paper if appropriate)

Assignee Signature: _____

Reviewed: _____ **Reviewed:** _____

Approved: _____ **Date:** _____

Closed: _____ **Date:** _____

CC: _____ _____ _____ _____

_____ _____ _____ _____

Preliminary Design Requirements Review Checklist

The following items should be addressed, to the extent possible, during the Preliminary Design Requirements Review (PDRR). The objective is to ensure that the development requirements are defined and to adequately represent the requirements to begin the preliminary design.

- ❑ Subsystem block and functional diagrams
- ❑ Physics parameter analyses and simulation data
- ❑ Physics, engineering, and construction requirements allocation
- ❑ Risk and abatement strategy for cost, schedule, and technical performance risks
- ❑ Draft Software Development Plan
- ❑ Reliability, maintainability, availability requirements
- ❑ Interface studies
- ❑ Environmental, Health, and Safety requirements
- ❑ Trade Studies
- ❑ Quality Control approach
- ❑ High-level software requirements
- ❑ Test method(s)
- ❑ Computer system configuration/architecture
- ❑ Schedules
- ❑ Problems and concerns.

Preliminary Design Review Checklist

The following items should be addressed during the Preliminary Design Review (PDR):

- ❑ Subsystem block and functional diagrams
- ❑ Equipment layouts and preliminary drawings
- ❑ Environmental controls and thermal design aspects
- ❑ Power distribution and grounding
- ❑ Electromagnetic compatibility considerations
- ❑ Instrumentation, control, and diagnostic design approach
- ❑ Producibility and manufacturing considerations
- ❑ Preliminary parts lists
- ❑ Support system requirements and design approach
- ❑ Preliminary Development Specifications
- ❑ Physics parameter modeling, test, and simulation data
- ❑ Software Development Plan
- ❑ Software requirements specifications (Preliminary Design)
- ❑ Risk and abatement strategy for cost, schedule, and technical performance risks
- ❑ Draft interface control documents
- ❑ Design standardization and logistic considerations
- ❑ Trade and design studies
- ❑ Preliminary reliability, maintainability, and availability analyses
- ❑ Transportability, packaging, and handling considerations (including electrostatic discharge protection)
- ❑ Environmental, Health, and Safety analyses (specifically a Preliminary Safety Analysis Report)
- ❑ Quality Control Planning
- ❑ Test methodology
- ❑ Schedules
- ❑ Problems and Concerns.

Critical Design Review Checklist

The following items should be addressed, to the extent possible, during the Critical Design Review (CDR). Review of the detailed design drawing package is essential.

- ❑ Subsystem block and functional diagrams
- ❑ Drawing package (assembly drawings and majority of remaining drawings)
- ❑ Final parts lists
- ❑ Final development specifications
- ❑ Draft product specifications
- ❑ Final interface control documents
- ❑ Design analysis and engineering test data
- ❑ Detailed software design, database design, interface design, firmware support, and computer resources integrated support documents
- ❑ Logistic support considerations:
    - ❑ Transportability, packaging, and handling
    - ❑ Standardization
    - ❑ Support equipment requirements
    - ❑ Spares requirements
    - ❑ Calibration requirements
- ❑ Risk: cost, schedule, and technical
- ❑ Plans for acquisition of parts, components, and materials needed for fabrication
- ❑ Production plans
- ❑ Design reliability and maintainability
- ❑ System safety
- ❑ Quality control plans
- ❑ Test plans (hardware, software, other)
- ❑ Schedules
- ❑ Problems and concerns

Acceptance Test Plan Review Checklist

The following items should be addressed during the Acceptance Test Plan Review (ATPR). Assurance that the acceptance tests are properly planned and adequate test resources have been allocated are the main points to be addressed.

- ❑ Acceptance Test Plan overview and status
- ❑ Tests planned or data analyzed to verify performance (including reliability, maintainability, and availability)
- ❑ Tests planned in conjunction with post-test analyses confirm that environmental, health, and safety requirements are being met. (A final Safety Analysis Report is due.)
- ❑ Proper evaluation resources allocated
- ❑ ATP compatible with commissioning plans
- ❑ Schedule
- ❑ Problems and concerns.